Intellectual Capital Disclosures in India: a case study of Information Technology Sector

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Abstract:

The world is fast changing from industrial to knowledge economy and the Indian economy has attracted the attention of the whole globe with its fast growing knowledge sector. Today, the software industry in India exports software and services to nearly 95 countries around the world and more than two third of Fortune 500 companies outsource their software requirements to India and it is turning to be a global centre for the back-office operations of several multi-national companies. The country is on the threshold of becoming a knowledge superpower because one of its strongest assets as a nation is the toiling nature and creativity of its people. It is with this background in mind, this study aims to identify the meaning and significance of intellectual capital along with the study of prevalent models and to evaluate the prevailing practices of recording and reporting of intellectual capital by the 15 leading information technology sector companies in India. The content analysis of the annual reports makes it amply clear that IC recording and reporting in the Indian IT companies is almost negligible. It is evident from the results that intellectual capital reporting has not got any preference or priority for the mentors of the Indian corporations. The average number of items reported by the companies is deplorably low which suggests that there is neither awareness nor any interest to record and report intellectual capital variables by the companies.

Keywords: Intellectual Capital, Knowledge Capital, Indian Economy, Information Technology Sector, Human Capital

Paper Type: Research Paper

1. Introduction

The world is fast changing from industrial to knowledge economy and Indian economy has attracted the attention of the whole globe with its fast growing knowledge sector. In its 11th five year plan (2007-08), the Planning Commission, Government of India highlighted that Information technology had made a revolutionary change in the history of global trade and services. Today, India has made its presence felt in the Information Technology world and is considered as the premier destination for the global sourcing of IT and IT-enabled Services. The exceptional growth of the Indian IT Software and Services and IT-enabled Services-Business Process Outsourcing (ITES-BPO) sector has put a perceptible multiplier effect on the Indian economy as a whole. According to the estimates of Planning Commission, "India's success in the export of IT Software and Related Services over the past decade remains unparalleled. Total export revenues earned by this sector have grown from US$ 7.7 billion in 2001–02 to US$ 31.3 billion in 2006–07, thus showing a near 32% compound growth rate. India now accounts for 65% of the global market in the offshore IT and 46% of the ITES market. A majority of the Fortune 500 and Global 2000 corporations are sourcing IT and ITES from India."

Dun and Bradstreet in its survey (2008) depicts that the contribution of the IT industry to the GDP of India has grown significantly from 1.8% in 1999-2000 to around 5.4% in the financial year 2007. According to The National Association of Software and Services Companies (NASSCOM), the size of the Indian IT industry was estimated to be approximately US$ 47.8 billion in the financial year 2007. The exports market constitutes the largest segment accounting for around 65.5% of the total revenue generated by the Indian IT industry, including hardware. It is more aggressive in tapping the global market. Thus, it is in the fitness of things to say that during the last few years, Indian IT companies have established themselves in the global market and the country is

on the threshold of becoming a knowledge superpower because one of its strongest assets as a nation is the toiling nature and creativity of its people.

It is a fact that people will be the key factor in the future and their knowledge reservoir will be the most important resource of the organisation. According to Patibandla and Petersen (2002), the knowledge-based software and service export industry in India is, by its nature, Human Capital intensive with physical capital requirements confined to office space and hardware and that in this industry production activity embodies technological learning that requires skills, knowledge and capabilities. Thus, the future drivers of the economy will no longer be capital, land or equipment; rather it will be the people and their knowledge-all the soft stuff- because in a knowledge economy, intangible assets are the key drivers of market value. The real sources of success in this system are the intelligence, flexibility and innovativeness of people, enterprises and nations.

A knowledge-intensive company leverages know-how, innovation and reputation to achieve success in the marketplace. Managing a knowledge organization necessitates a focus on the critical issues of organizational adaption, survival, and competence in the face of ever-increasing, discontinuous environmental change. The profitability of a knowledge firm depends on its ability to leverage the learnability of its professionals, and to enhance the reusability of their knowledge and expertise. The intangible assets of a company include its brand, its ability to attract, develop and nurture a cadre of competent professionals, and its ability to attract and retain marqué (brand) clients (Infosys Annual Report 2007-08).

It is evident from the above description that knowledge assets have a significant role in defining the growth of a high-tech company. It is with this background in mind that the study of 15 leading Indian IT companies, considered to be highly knowledge intensive, is undertaken to ascertain their disclosure level of recording and reporting of intellectual capital. An effort has been made in this paper to identify the meaning and significance of intellectual capital along with studying the view point of early exponents of intellectual capital and to evaluate the prevailing practices of recording and reporting of intellectual capital by the corporate sector in India. The scope of the paper has been limited to the selected 15 companies of the IT sector on the basis of the total income generated by them in the year 2007-08.

2. Concept of Intellectual Capital

The concept of intellectual capital gained momentum in the 1990s with the rapid emergence of information and communication technologies. The organisation for Economic Co-operation and Development (2000) describes intellectual capital as the economic value of two categories of intangible assets of a company: organizational capital and human capital. It is possession of knowledge, applied experience, organizational technology, customer relationships and professional skills that provide a competitive edge in the market (Edvinsson, 1997).As a consequence; it signifies that information is an important factor of production along with land, labour, capital and energy. It is the prime source of organisation that needs to be sustained, nurtured and accounted for. Natrajan and Ganesh (2003) describe Intellectual capital as the documented knowledge available in the form of research papers, reports, books, articles, manuscripts, patents and software. Magdaraog (2004) believes that the essence of knowledge capital does not lie in its creation or codification rather in its use and realization because knowledge created and codified is worthless until it is put to use and people benefit from its use. The following descriptions of Intellectual Capital available in the existing literature on the subject are worth noting and quoting:

- Intellectual material that has been formalized, captured and leveraged to produce a higher valued asset (Klein and Prusak 1994);
- Accumulated value of investments in employee training, competence and the future (Skandia, 1996);
- Combined intangible assets of market, intellectual property, human-centred and infrastructure which enable the company to function (Brooking 1996);

- Information and knowledge applied to create value (Edvinsson 1997);
- Intellectual capital is the net difference between the market value of a corporation and its tangible assets (Strassmann 1999)
- Knowledge, information, intellectual property, experience that can be put to use to create wealth (Stewart, 1997);
- The holistic meta-level capability of an organisation to generate creative and effective responses to extant and emerging, present and potential challenges facing it, in an ongoing manner (Rastogi, 2000);
- Claim to future benefits that does not have a physical or financial embodiment (Lev 2001)
- Knowledge that can be converted into profit (Sullivan 2000)
- Individual knowledge stock of an organisation as represented by its employees (Bontis 2003); and
- Difference between company's market value and its book value, or the resources created from internal learning and development of valuable relationships (Pablos, 2003).

On the basis of the above descriptions, it can be concluded that the collective Intellectual Capital of an organization is represented by the skill and experience of its employees as also by its corporate information repositories. Petty and Guthrie (2000) conclude that intellectual capital is a very reliable indicator of the future earning potentialities or net worth of a company and in one form or the other, it is implied in recent economic, managerial, technological and sociological developments in a manner previously unknown and largely unforeseen.

3. Constituents of Intellectual Capital

Broadly speaking, Intellectual capital consists of two components which are not only interrelated but are interactive also. These are: human capital and information. Of these, human capital is the collective human competence comprising intelligence, education, skills, experience, intuition and imagination as influenced by emotional and motivational attributes. Obviously, this kind of knowledge is difficult to be documented, communicated and transmitted. On the other side, information constitutes those achievements and experiences of man which can be documented, communicated and transferred. These include books, papers, studies, reports, software, databases, CDs, and patents etc. This information becomes independent of its creators once it is documented and communicated. It can be tested objectively for its reliability and validity and can also be altered, improved and used simultaneously by any number of people at the same time. Thus, Intellectual Capital exists within the minds of the people as well as in the form of formal information which is outside the minds.

4. Early Exponents of Intellectual Capital

The evolution of knowledge capital management as a discipline can be traced to the long past though no visible pattern was discernible then. Sullivan (2000) describes, "Knowledge capital management movement is believed to have taken off from three distinctly different origins. The first was the pioneer work of Hiroyuki Itarni of Japan who studied the impact of *invisible assets* on the management of Japanese corporations. The second was the work of economists like Penrose, Rumelt, Wemerfelt and others on technology commercialization. Finally, there was the work of Karl-Erik Sveiby in Sweden which addressed the human capital dimension of intellectual capital."

Sveiby (1997), regarded as the founding father of knowledge management and intellectual capital movement in Sweden, gave a logical explanation about the management of the organizations that had only knowledge and creativity of their employees but no traditional production. He proposed a theory for measuring knowledge capital by dividing it into three categories: C*ustomer Capital, Individual Capital, and Structural Capital*.

The Swedish insurance company Skandia which published the first intellectual capital report in 1994, signifies intangible assets which include human capital; customer/market capital; process

capital; and, renewal and development capital. According to it, the potential financial returns that are attributable to these intangible or non-financial assets represent the value of intellectual capital. This model provides a comprehensive and integrated view of financial as well as intellectual capital. Generally, it is the hard quantitative data that is used as indicators for scrutinizing the internal and external processes taking place in a country. However, this model declared that such indicators failed to provide full and accurate assessment of the country's assets and its potential for future growth. Thus, it described intellectual capital as a complement of financial capital. It is a point to be noted that as an outcome of this model it becomes evident that while financial capital highlights the history and achievements of the *past* of a country, the intellectual capital reflects its hidden national potential for *future* growth.

Strassmann (1999) laid emphasis on the value of corporate knowledge. According to him, intellectual capital is nothing but creative energy which springs forth from something that is intangible, as if it were an artistic conception. It ultimately leads to management value addition. It is because of this value addition that market value of a company is different from its book value. Apparently, management value-added depends, to a large extent, on the level of knowledge capital. This accumulated knowledge increases work efficiency which ultimately increases the total value of products or services of a company.

Kaplan and Norton (1992) rejected the traditional financial reporting calling it too narrow in its outlook. They averred that it ignored the future and focused only on present and past. They suggested that the companies should use a 'balanced score card' that included, besides the traditional financial measures, other things such as customer satisfaction and turnover as well as comparative product quality, as these things were better indicators of current performance and likely future performance. They opined that intellectual capital must be a part of the balanced scorecard.

Lev (2001), who started his research in the early 1990s on the valuation of intangibles, focused on quantifying the value of intangibles and correlating the values so obtained with financial measures adopted in the capital markets. He opines that the traditional accounting model which recognizes only tangibles assets and focuses only on legal transactions while ignoring other value-changing events was not appropriate to deal with the new economic environment. He asserts that it no longer meets the needs of the managers and investors of the present times. He presented an improved GAAP; double-entry system based on the economic definition of an asset as Financial-Economic Capital and an information system aimed at capturing the links between resources and outcomes as Non financial-Path Matrices.

5. Methodology

The main objective of the paper is to evaluate the prevailing practices of recording and reporting of intellectual capital by the corporate sector in India. The sample of the study consists of 15 top IT companies of India on the basis of their total income as per the 2008 publication of Dun and Bradstreet, a premier survey agency of the country. The annual reports of the selected companies were obtained for the year 2007-08 in *abode acrobat format* from the respective websites of the companies. Content analysis has been used to analyse the extent of disclosure of intellectual capital reporting by the companies under study. Many studies have been conducted to analyse the intellectual capital reporting practices abroad by using content analysis of annual reports (Guthrie and Petty, 2000 Brenan, 2001; Olsson, 2001; Bontis, 2003; Bozzolan *et al.*, 2003; Abeysekera and Guthrie, 2003). In India, one such study is available on Intellectual capital disclosure in India: Content analysis of 'TECK' firms (Kamath, 2008).

The items of intellectual capital selected for the purpose of study depicts the same list of 39 terms that was summarized by a panel of researchers from World Congress on Intellectual Capital which were found comprehensive enough to represent IC literature (Bontis 2003). The annual reports were searched electronically to find out the presence or absence of the said terms. Results

were tabulated on the basis of the number of companies disclosing these terms in their annual report. Company-wise analysis, along with testing the degree of variance, has also been undertaken.

The content-wise analysis has been presented in table I, company-wise analysis in table II and the variation in disclosure has been presented in table no. III.

Table-I
Content-wise Analysis of Intellectual Capital Disclosure

S. No.	Items of Intellectual Capital	No. of Disclosing Companies
1.	Business knowledge	Nil
2.	Company reputation	2
3.	Competitive intelligence	Nil
4.	Corporate learning	Nil
5.	Corporate university	Nil
6.	Cultural diversity	2
7.	Customer capital	Nil
8.	Customer knowledge	Nil
9.	Economic value added	3
10.	Employee expertise	Nil
11.	Employee know-how	Nil
12.	Employee knowledge	Nil
13.	Employee productivity	Nil
14	Employee efficiency	Nil
15.	Employee skill	1
16.	Employee value	1
17.	Knowledge assets	1
18.	Expert teams	Nil
19.	Knowledge sharing	2
20.	Knowledge stock	Nil
21.	Management quality	Nil
22.	IC	Nil
23.	Information systems	10
24.	Relational capital	Nil
25.	Intellectual capital	2
26.	Intellectual material	Nil
27	Intellectual property	13
28.	Intellectual resources	Nil
29.	KM	Nil
20.	Expert networks	Nil
31.	Knowledge management	5
32.	Human assets	Nil
33.	Human capital	4
34.	Human value	1
35.	Organizational culture	2
36.	Organizational learning	Nil
37.	Intellectual assets	Nil
38.	Structural capital	Nil
39.	Supplier knowledge	Nil

Table-II
Company-wise Analysis of Intellectual Capital Disclosure

S. No.	Name of the Company	No. of Items Disclosed
1.	Tata Consultancy Services Ltd.	7
2.	Wipro Limited	3
3.	Infosys Technologies Ltd.	13
4.	HCL Infosystems Ltd.	1
5.	Siemens Information System Ltd.	2
6.	Satyam Computer Service Ltd.	5
7.	HCL Technologies Ltd.	3
8.	Tech Mahindra Ltd.	1
9.	Moser Baer India Ltd.	3
10.	I-flex Solutions Ltd.	2
11.	Patni Computer System Ltd.	3
12.	Larsen & Toubro Infotech Ltd.	1
13.	MphasiS Ltd.	2
14	CMC Limited	2
15.	Polaris Software Lab Ltd.	3

Table-III

Variation in Item-wise Disclosure

No. of Disclosing Companies → / Number of Items Covered ↓	2007-08
0-3	7
3-6	6
6-9	1
9-12	0
12-15	1
Mean Disclosure	3.9
Standard Deviation	3.12
Coefficient of Variation	80%

6. Analysis of the Results

Table-I indicates that only 14 items out of the list of 39 were found in the annual reports of the companies. The term intellectual property had the maximum disclosure by 13 companies followed by the disclosure of the term information system. Intellectual capital, the theme term of the paper, was disclosed by a meager 2 companies i.e. Moser Baer India Ltd. and Patni Computer System Ltd. Moser Baer declares in its annual report of the year 2007-08:

Quality of our human resources charts the success and growth potential of our business. The Company has managed to keep attrition rates well in control by imbibing a sense of ownership and pride and strong HR initiatives geared to nurturing latent talent and unlocking the power of intellectual capital. The Company continues to drive organization development and also build management resources for a multi-business enterprise.

Patni Computer System Ltd. makes a mention of its intellectual capital in its annual report for the year 2007-08 as under:

The global sourcing market has matured from those days when India was considered to be a source of 'low-cost manpower'. Today, it has earned the distinction of being a 'preferred destination for intellectual capital' that accelerates the trend - globalization of services.

The term knowledge management which is supposed to occupy a place of prominence at least in knowledge based IT companies was disclosed only by 5 companies. However, most of the terms relating to the employees and customers could not find any place in the annual reports of the selected companies. The important constituents of intellectual capital-relational capital, structural capital and customer capital-also did not figure in any of the annual reports of the companies under study.

Table-II highlights that Infosys Technologies Ltd. has disclosed the maximum number of items (13) from the total list if 39 items. It is worth mentioning that this company was the first Indian company to win the Most Admired Knowledge Enterprise in Asia award in the year 2002. However, it is surprising to note that this company did not make any mention of the theme term intellectual capital in its annual report though it is the only company among the companies under study to use intangible assets score sheet as a measure to disclose the intellectual capital. The company in its annual report of the year 2007-08 makes the following remarks:

We published models for valuing two of our most important intangible assets – human resources and the "Infosys" brand. This score sheet is broadly adopted from the intangible asset score sheet provided in the book titled The New Organizational Wealth, written by Dr. Karl-Erik Sveiby and published by Berrett-Koehler Publishers Inc.,San Francisco. We believe such representation of intangible assets provides a tool to our investors for evaluating our market-worthiness.

Tata Consultancy Services Ltd. disclosed only 7 items which is followed by Sataym Computer Service Ltd. with a disclosure of 5 items. Rest of the companies disclosed in the range of 1 to 3 items as for as disclosure of IC terms are concerned. It is also important to note that the disclosed items have been shown at scattered places in the annual reports. The mean disclosure comes to be as low as 3.9 items. There is a variation of 3.12 items on average as suggested by the value of standard deviation. The coefficient of variation comes to be as high as 80% which indicates a significant variation in item-wise disclosure in the annual reports of the companies. Last but not least, there is no specific reporting of intellectual capital as a special part or content of the annual report inspite of its high relevance in the knowledge intensive industries.

7. Conclusions

The above analysis makes it amply clear that IC recording and reporting in the Indian IT companies is almost negligible. It is evident from the above results that intellectual capital reporting has not got any preference or priority for the mentors of the Indian corporations. The average number of items reported by the companies is deplorably low which suggests that there is neither awareness nor any interest to record and report intellectual capital variables by the companies. Even the items which were reported were expressed in discursive rather than in numerical terms. It has also been found that there exists no clear cut pattern or system of intellectual capital disclosure in the annual reports. The reporting was not uniform and no evidence of its clear cut measurement was found in the annual reports. Thus, Indian companies are also lagging behind in the field of measurement, reporting and disclosure of intellectual capital. Our findings are found similar in comparison to various other studies on the subject (Bontis, 2003, Brennan, 200, Pablos, 2003 and Kamath, 2008) which signify very low level of intellectual capital disclosure. However, it is really astonishing to find that if the IT companies, whose very basis of existence is knowledge, fail so miserably in the disclosure of Intellectual capital, what can be expected from the rest of the corporate sector?

We must remember that people are clearly the key factor of the future and intellectual capital is the key driver of market value in the knowledge economy. It is strongly recommended that companies must create a culture that emphasizes the importance of intellectual capital in achieving business advantage. The knowledge should be treated as a key source of production of wealth and a

theory that puts knowledge into the centre of wealth producing process need to be implemented. The accounting bodies at the global level should join heads to develop an internationally accepted valuation system of intellectual capital in order to give it a concrete shape and meaning. Last but not least, some parameters must be defined for the disclosure of Intellectual Capital in a similar fashion as has been defined for disclosure of corporate governance as per clause 49 of Securities Exchange Board of India (SEBI) in order to make beginning in the field.

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